REMARKS

Status of the Application

The Applicants wish to thank the Examiner for his clear explanation of the rejections in the Final Office Action dated January 12, 2005. Claims 26-39 are pending in this application. Claims 26, 30-32, 35 and 37 have been rejected under 35 U.S.C. § 102(b). Claims 26 and 28-34 have been rejected under 35 U.S.C. § 102(e). Claims 26 and 29-32 have been rejected under 35 U.S.C. § 103(a). Finally, Claims 27 and 39 have been rejected under 35 U.S.C. § 103(a). Thus, Claims 26-35, 37 and 39 are rejected under 35 U.S.C. § 102 and/or 35 U.S.C. § 103. Claims 36 and 38 are objected to as dependent on rejected claims.

Claim 26 has been amended to recite that the second polymerization catalyst has little or no tendency to copolymerize α-olefins with ethylene under polymerization conditions. Basis for this change is found in claim 28 and at p. 14, lines 24-31 of the present application. Claim 26 has also been amended to recite that the first and second active polymerization catalysts are chosen from the group consisting of Ziegler-Natta and metallocene catalysts. Basis for this change is found at p. 13, line 23 to p. 14, line 3 and p. 14, lines 11-25 of the present application.

A phrase has been deleted from claims 28 and 33 because it is redundant in light of the amendment to claim 26.

Claims 29 and 34 have been canceled.

Response to Rejection under 35 U.S.C. § 102

(I) U. S. Patent 4,937,299 to Ewen, et al.- 35 U.S.C. § 102(b)

Claims 26, 30-32, 35 and 37 have been rejected under 35 U.S.C. § 102 (b) as being anticipated by U.S. Patent No. 4,937,299 to Ewen, et al. (hereinafter "Ewen"). The Examiner contends that different metallocene structures required in the process disclosed by Ewen would inherently have different copolymerization activity because of their different structures. Therefore, according to the Examiner, the Ewen disclosure would meet the requirement that the second catalyst does "not readily

copolymerize" because the Applicants' definition of this phrase includes a scope wherein any difference at all in copolymerization activity meets the definition.

In response to the Examiner's argument, this phrase has been deleted from Claim 26. It is now replaced by the phrase "little or no tendency to copolymerize," which should be allowable over the Ewen reference, inferred from the fact that Claims 28 and 33 are deemed allowable over this reference.

(II) U. S. Patent 5,539,076 to Nowlin, et al.- 35 U.S.C. § 102(b)

Claims 26 and 30-32 have been rejected under 35 U.S.C. § 102 (b) as being anticipated by U.S. Patent No. 5,539,076 to Nowlin, et al. (hereinafter "Nowlin"). The Examiner states that Nowlin teaches, *inter alia*, a method of polymerizing ethylene with hexene using two different supported transition metal catalysts, including all claim limitations. Further, the Examiner reasons that because the catalyst structures in the Nowlin process are different, they would inherently have different copolymerization activity. Therefore, according to the Examiner, the Nowlin disclosure would meet the requirement that the second catalyst does "not readily copolymerize" because the Applicants' definition of this phrase includes a scope wherein any difference at all in copolymerization activity meets the definition.

In response to the Examiner's reasoning, as mentioned previously, this phrase has been deleted from Claim 26. It is now replaced by the phrase "little or no tendency to copolymerize," which should be allowable over the Nowlin reference also, inferred from the fact that claims 28 and 33 are deemed allowable over this reference.

(III) U. S. Patent App. No. 2002/0.077.432 to Bennett, et al. 35 U.S.C. § 102(e)

Claims 26 and 28-34 have been rejected under 35 U.S.C. § 102(e) as anticipated by U.S. Patent Application No. 2002/0,077,432 to Bennett, et al.(hereinafter "Bennett"). These claims were apparently rejected because the Examiner contends that Bennett teaches a method of copolymerizing olefins comprising the use of an early transition metal catalyst and a late transition metal catalyst. Further, according to the Examiner, Bennett teaches that preferred species of the late transition metal are iron, ruthenium, cobalt or rhodium catalysts.

In light of the Examiner's contention, Claim 26 is limited in that, both the first and the second active polymerization catalysts are now chosen from the group

consisting of Ziegler-Natta catalysts and metallocenes. Therefore, certain catalyst complexes, particularly certain iron complexes, are now not included in the polymerization catalysts. Applicants believe that this rejection is overcome as a result of this particular amendment to Claim 26.

Response to Rejection under 35 U.S.C. § 103

(I) U. S. Patent 6,461,994 to Gibson, et al.- 35 U.S.C. § 103(a)

Claims 26 and 29-32 have been rejected under 35 U.S.C. 103(a) as being unpatentable over U. S. Patent 6,461,994 to Gibson et al.(hereinafter "Gibson").

The Examiner states that Gibson is directed to the use of tridentate ligands of transition metal catalysts, particularly Fe species, as polymerization catalysts. Further, according to the Examiner, since Gibson suggests the addition of a second supported catalyst, such as a metallocene, Ziegler-Natta or Phillips catalyst component to the process set forth in an example in Gibson, an ordinary skilled chemist would "immediately envisage" that such a use would necessarily result in an in-situ blend. Furthermore, the Examiner reasons that because the two catalysts have substantially different structures, which results in their having a different copolymerization activity. Therefore, according to the Examiner, a person of ordinary skill in the art would be motivated to add a second supported catalyst to the exemplified methods.

In light of Examiner's reasoning and interpretation of Gibson, Applicants have limited Claim 26 in that, both the first and the second active polymerization catalysts are now chosen from the group consisting of Ziegler-Natta catalysts and metallocenes. Therefore, certain catalyst complexes, particularly certain iron complexes of tridentate ligands, are now not included in the polymerization catalysts. Applicants believe that the obviousness rejection is overcome as a result of this particular amendment to Claim 26. Claim 29 has been canceled because it is redundant in light of the amendment to Claim 26. Since Claims 30-32 are dependent on Claim 26, they are in a condition of allowability.

(II) U. S. Patent App. No. 2002/0.077.432 to Bennett, et al.-35 U.S.C. § 103(a)

Claims 27 and 39 have been rejected under 35 U.S.C. § 103(a) as unpatentable over U.S. Patent Application No. 2002/0,077,432 to Bennett, et al.(hereinafter "Bennett").

The Examiner states that Bennett does not recite only that element corresponding to the specific identification of which monomers should be selected when adding more than one comonomer. According to the Examiner, however, Bennett discloses that the process may comprise one or more olefinic comonomers such as ethylene or C3-C20 alpha olefins. Therefore, one of ordinary skill in the art would be motivated to select from at least the simplest group including ethylene in combination with propylene and butene, or butene with hexene. Because Bennett states that these types of copolymerizations are within the scope of the disclosed process, reasonable success would be expected.

The Applicants respectfully disagree with the Examiner's reasoning of obviousness under 35 U.S.C. § 103(a) with reference to Bennett.

Section 2142 of the MPEP indicates that a *prima facie* case of obviousness is established only when:

(1) all of the claim limitations are either taught, or suggested by the cited prior art.;

(2) there is some suggestion or motivation to modify or combine the cited prior art references; AND

(3) there is a reasonable expectation of successfully producing the claimed invention via such a combination.

Applicants respectfully submit that because prong (1) of the above test is not satisfied, *prima facie* case of obviousness is not established.

Specifically, Applicants respectfully disagree that Bennett discloses all elements of the present invention, except the selection of monomer. In fact, Bennett requires the presence of at least one late transition metal catalyst and at least one early transition metal catalyst (See page 8, claim 1). On the contrary, the claimed catalyst combinations of the present invention utilize early transition metals (and sometimes lanthanide metals) only, as is well known in pertinent art.

Therefore, Bennett does not render these claims obvious as it neither teaches nor suggests the use of only early transition metal compounds as polymerization catalysts.

Claim Objections

Claims 36 and 38 are objected to as being dependent upon rejected Claims 28 and 33 respectively. Applicants respectfully request reconsideration in light of the amendment to Claims 28 and 33.

CONCLUSION

Applicants believe that a full and complete response has been made to the outstanding Final Office Action dated January 12, 2005 and that all of the stated grounds of rejection have been properly traversed, accommodated, or rendered moot. As such, Applicants assert that the present application is in condition for allowance, and a Notice of Allowance is respectfully solicited.

Since a one-month extension of time is necessary to prevent abandonment of this application, such an extension of time is hereby petitioned under 37 C.F.R. § 1.136(a), and any fees required therefore are hereby authorized to be charged to our Deposit Account No. 04-1928 (E. I. du Pont de Nemours and Co.). Furthermore, if any other fees are required in connection with the filing of this response, you are hereby authorized to charge Deposit Account No. 04-1928.

If the Examiner believes for any reason that personal communication will expedite prosecution of this application, the Examiner is invited to telephone the undersigned at the number provided.

Respectfully submitted,

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